

Claims

1. Process to cross-link a polymer/elastomer by means of the free radicals formed by the decomposition of a peroxide, wherein one or more copolymers comprising olefin-derived moieties as well as anhydride and/or acid groups is used in a quantity of from 0.05 to 10 per cent by weight of the total composition, with the proviso that if said copolymer is a maleic anhydride-modified polybutadiene, then the compositions do not contain both an elastomer and brass.
2. Process according to claim 1 wherein the peroxide is used in an amount of from 1 to 5, preferably from 1.5 to 4, per cent by weight, based on the weight of the polymer/elastomer.
3. Process according to claim 1 or 2 wherein the polymer/elastomer is selected from polyolefins and elastomers, preferably from the group consisting of polyethylene and ethylene- α -olefin copolymers, including ethylene propylene copolymer, ethylene octene copolymer, and ethylene propylene diene copolymer.
4. Process according to any one of the preceding claims wherein the copolymer with olefin-derived moieties and anhydride and/or acid groups has a molecular weight from 500 to 50,000.
5. Process according to claim 4 wherein the copolymer comprises olefinic units derived from ethylene, propylene, butadiene, isobutylene and/or C₆ to C₂₄ (α -)olefins, preferably C₁₂ to C₁₈ olefins, and anhydride/acid groups derived from maleic anhydride, (di)alkyl/aryl-maleic anhydride, (substituted) norbornene-2,3-dicarboxylic anhydride,

EPO - DG 1

AC 73, c(1-13)
10070121 091302

03.10.2001

20

99

(meth)acrylic acid, maleic acid, fumaric acid, itaconic acid and/or citraconic acid, preferably from maleic anhydride or methacrylic acid.

6. Products obtainable by the process of any one of the preceding claims.

5

7. Compositions containing:

- 5-60% by weight, based on the total weight of the composition, of one or more peroxides,
 - 0.1-500% by weight, based on the weight of the peroxide(s), of a copolymer with olefin-derived moieties and anhydride and/or acid groups,
 - optional further additives, and
 - 0-50% by weight of a carrier material,
- which are suitable for use in the process of claim 1.

15

8. Composition according to claim 7 wherein the copolymer has a molecular weight from 500 to 50,000.

9. Composition according to claim 7 or 8 wherein the copolymer comprises olefinic units derived from propylene, butadiene, isobutylene and/or C₆ to C₂₄ α -olefins, preferably C₁₂ to C₁₈ olefins, and anhydride/acid groups derived from maleic anhydride; (di)alkyl/aryl-maleic anhydride; such as n-dodecylmaleic anhydride, citraconic anhydride, and maleic phenyl anhydride; (substituted) norbornene-2,3-dicarboxylic anhydride; (meth)acrylic acid; maleic acid; fumaric acid; itaconic acid and/or citraconic acid, preferably from maleic anhydride or methacrylic acid.

20
25

10. Composition according to any one of claims 7-9 wherein the copolymer is obtained from monomer mixtures comprising 5-75% by weight of anhydride/acid group-containing monomers.
- 5 11. Compositions containing 1-99.9% by weight, based on the total weight of the composition, of conventional additives and/or conventional carrier materials and 99-0.1% by weight, based on the weight of the composition, of a copolymer with olefin-derived moieties and anhydride and/or acid groups, up to a total of 100%, which are
- 10 suitable for use in the process of claim 1.